

MURATOV, M.V., otv. red.; PUSHCHAROVSKIY, Yu.M., red.; KHAIN, V.Ye., red.; MAZAROVICH, O.A., red.; BELOUSOV, V.V., red.; BELYAYEVSKIY, N.A., red.; BOGDANOV, A.A., red.; GARETSKIY, R.G., red.; GUBIN, I.Ye., red.; KROPOTKIN, P.N., red.; LEYTES, A.M., red.; NIKOLAYEV, N.I., red.; PAVLOVSKIY, Ye.V., red.; PEYVE, A.V., red.; PETRUSHEVSKIY, B.A., red.; SHEYNMANN, Yu.M., red.; SHTREYS, N.A., red.; YANSHIN, A.L., red.

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A.A., red.; GUEIN, I.Ye., red.; KHCIPOTKIN, P.N., red.;
LEYTES, A.M., red.; MAZAROVICH, O.A., red.; MURATOV, M.V.,
red.; NIKOLAYEV, N.I., red.; PAVLOVSKIY, Ye.V., red.; PEYVE,
A.V., red.; PETRUSHEVSKIY, B.A. red.; PUSHCHAROVSKIY, Yu.M.,
red.; SHEYNMANN, Yu.M., red.; SHTREYS N.A., red.

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ing oil and gas; materials] Molodye platformy, ikh tektonika
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tectonic zone. Trudy GIN no.89:28-54 '63.

(MIRA 18:6)

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Cenozoic folded zone. Trudy GIN no.89:55-119 '63.

(MIRA 18:6)

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Ways of tectonic regionalization of the belt of Cenozoic
structures framing the Pacific Ocean. Trudy GIN no.113:161-
169 '64. (MIRA 18:9)

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Outline of the tectonics of the New Guinea-New Zealand sector
of the Pacific Cenozoic tectonic belt. Trudy GIN no.139:
85-127 '65. (MIRA 1800)

ALLIN, Anatoly Leonovich, akademik (deceased); VASSALYEVNA,
V.A., glav. red.; KHEMER, V.V., otv. red.; YANSHIN, A.L.,
akademik, red.; CHEPASHOVA, N.A., red.; KILG-POLSKY, N.N.,
red.; MIKHAYLOV, N.P., red.; PESHCHAROVSKIY, Yu.N., red.;
SHANTSER, Ya.V., red.

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Moskva, Nauka, 1965. 294 p. (LIRA 78:1)

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Basic characteristics of the Pacific tectonic belt. Geotektonika
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1. Geologicheskii institut AN SSSR. Submitted Aug. 2, 1965.

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(MIRA 15:2)

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(Arctic regions--Geology, Structural)

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Tectonic pattern of the Kolyma Range. Biul. MOIP. Otd. geol. 34
no.6:23-37 N-D '59. (MIRA 14:3)
(Kolyma Range—Geology, Structural)

SHATSKIY, Nikolay Sergeyevich, akademik, glav. red. [deceased];
SMIRNOV, V.I., red.; SHCHERBAKOV, D.I., akademik, red.;
GORSKIY, I.I., red.; DOLGOPOLOV, N.N., red.; PUSHCHAROV-
SKIY, Yu.M., red.; SOKOLOV, G.A., red.; TUGOLESOV, D.A.,
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[Mineral distribution characteristics] Zakonomernosti raz-
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Nikolai Sergeevich Shatskii; obituary. Geol. rud. mestorozh.
no.5:3-5 S-O '60. (MIRA 13:10)
(Shatskii, Nikolai Sergeevich, 1895-1960)
(Geology)

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Depression of the Priverkhoyanskiy Kray and the Mesozooids of North-Eastern
Asia". (BMVISO USSR, 2-61, 16)

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Repair stations at the district volunteer fire societies.

Pozh.delo 3 No.6:20 Je '57.

(MIRA 10:7)

(Fire departments)

PUSHCHAYENKO, N. (Yaroslavl')

After the necessary measures had been taken. Pozh.delo 7
no.10:6 0 '61. (MIRA 14:10)
(Furnaces—Safety measures)

L 13168-56 EWT(d)/EWT(1)

IJP(c) BB/OG

ACC NR: AP6001518

SOURCE CODE: UR/0302/65/000/004/0042/0044

AUTHOR: Pushenko, A. I.

43
B

ORG: None

TITLE: A device for recording controlling pulses on a magnetic drum 16C, 44

SOURCE: Avtomatika i priborostroyeniye, no. 4, 1965, 42-44

TOPIC TAGS: magnetic drum, magnetic recording, pulse storage

ABSTRACT: A device has been developed at the Institute of Cybernetics AN UkrSSR (Institut kibernetiki) for recording 1024 and 2048 synchronizing pulses without a break on one revolution of a magnetic drum while simultaneously magnetically recording an initial registration pulse using universal magnetic heads. Any other even number of synchronizing pulses may be recorded by changing the number of digital places in the synch pulse counter. The linear velocity of the magnetic drum surface may be varied. The primary source for the pulse train can be any laboratory generator of harmonic oscillations with a vernier for continuous frequency control and the proper output voltage (50-100 mv). Three magnetic heads are needed: one for recording the synchronizing pulses, one for recording the initial registration and one for erasure. A schematic block diagram of the instru-
Card 1/2 UDC: 681.142.652.4

L 13168-66

ACC NR: AP6001518

ment is given together with a brief description of its operation. Four or five repeat recording cycles are generally needed to give a clear reading on the oscilloscope screen of the point where the first and last of the series of synchronizing pulses meet. When controlling pulses are being recorded, the initial registration pulse is exactly coincident with one of the synchronizing pulses. If a shift between the synchronizing pulse and the initial registration pulse is required, the latter may be delayed by $1/2$ the prf of the synchronizing pulses. The device is simple in design and does not have any special requirements in the way of non-standard components, pulse oscillator stability or magnetic drum rotation speed. The unit may be mounted directly in a digital computer using elements which perform other logical functions. The repeated recording procedure is an insignificant drawback since it requires but little time. Orig. art. has: 2 figures.

SUB CODE: 09 / SUBM DATE: none

Card 2/2

I 07486-67 ENT(d)/ENT(m)/ENP(l)/ENP(t)/STI 1Jr(c) 00/00/00

ACC NR: AP6036068

SOURCE CODE: UR/0432/66/000/005/0049/0051

AUTHOR: Chernyak, R. Ya. (Candidate of technical sciences); Pushenko, A. I.;
Sai'kov, Yu. G.

ORG: none

TITLE: A dual magnetic head 160

SOURCE: Mekhanizatsiya i avtomatizatsiya upravleniya, no. 5, 1966, 49-51

TOPIC TAGS: recording equipment, magnetic recording, magnetic drum

ABSTRACT: A new device consisting of magnetic read and write heads connected by a common shift mechanism has been developed. The heads are mounted on a moving carriage which permits independent transverse displacement of each head along the track of the magnetic drum. One revolution of one of the adjusting screws provided for displacement moves the corresponding head 500 μ . Linear displacement is achieved by means of micrometer screws; each revolution of a micrometer screw displaces a head 100 μ . Both heads have the same dimensions; the core material is 79 NM-type Permalloy with width, 2 mm; gap, 60 μ ; and diameter, 2.5 mm. Output voltage of the read head is 300 mv at 40 m/sec linear speed of the magnetic carrier and at 350 mamp recording current. Special shielding reduces induced interferences to 4-6 mv, which is approximately 2% of the useful signal. Orig. art. has: 3 figures.

SUB CODE: 14 / SUBM DATE: none / ATD PRESS: 5104

Card 1/1

UDC: 681.84.083.82

ACC NR: AP6035737

SOURCE CODE: UR/0413/66/000/019/0101/0101

INVENTORS: Chernyak, R. Ya.; Kirilyuk, N. I.; Pushenko, A. I.; Oreshkin, Ye. S.; Strel'chenko, A. M.; Sal'kov, Yu. G.

ORG: none

TITLE: An information storage using magnetic cards. Class 42, No. 186762 [announced by Institute of Cybernetics, AN UkrSSR (Institut kibernetiki AN USSR)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 19, 1966, 101

TOPIC TAGS: information storage and retrieval, magnetic recording, storage device

ABSTRACT: This Author Certificate presents an information storage using magnetic cards. The storage unit includes an input keyboard, a vacuum drum for transferring the cards, and a buffer storage device (see Fig. 1). The design increases the

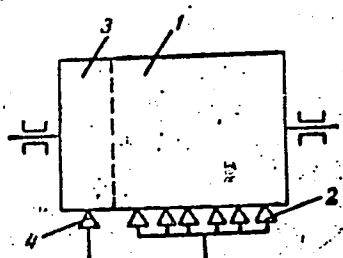


Fig. 1. 1 - vacuum drum; 2 - magnetic heads for recording the readout from the magnetic cards; 3 - surface of the vacuum drum, free from magnetic cards; 4 - magnetic heads of the buffer storage device

UDC: 681.142.07

Card 1/2

ACC NR: AP6035737

reliability and reduces the equipment requirement. The buffer storage device is made on the part of the vacuum drum surface free from magnetic cards. This part of the surface is coated with a nickel-cobalt film. Orig. art. has: 1 figure.

SUB CODE: 09/

SUBM DATE: 07Oct65

Card 2/2

BLAYVAS, L., inzh: SEYDER, E., inzh: PUSHCHENKO, V., inzh.

Extension indicator of the radar station "Don." Mer. flot 21
no. 6:18-19 Je '61. (MIRA 14:6)

(Radar in navigation)

5.3700

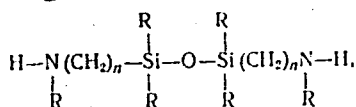
78087
SOV/62-60-1-33/37

AUTHORS: Petrov, A. D., Vdovin, V. M., Pushchevaya, K. S.

TITLE: Brief Communications. Concerning Reaction of
 α, ω -Di(chloroalkyl)tetraalkyldisiloxanes With
Ethylamine

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh
nauk, 1960, Nr 1, pp 143-145 (USSR)

ABSTRACT: In order to obtain organosilicon diamines of the type:

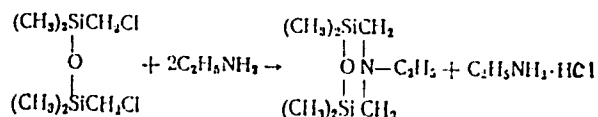


where $n = 1, 3$, the reaction of ethylamine with sym-di-(chloromethyl)tetramethyldisiloxane and sym-di(γ -chloropropyl)tetraalkyldisiloxane was studied. The sym-di(chloromethyl)tetramethyldisiloxane reacts with ethylamine at room temperature; however, the reaction proceeds in an unexpected direction (see scheme) with

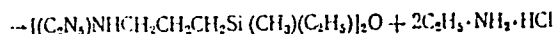
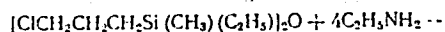
Card 1/5

Brier Communications. Concerning Reaction of 78087
 α, ω -Di(chloroalkyl)tetraalkyldisiloxanes With SOV/62-60-1-33/37
 Ethylamine

the formation of cyclic monoamine in about 90% yield.



The sym-di(γ -chloropropyl)tetraalkyldisiloxane does not react with ethylamine at room temperature even on standing for 10 days; but it reacts with ethylamine at 100° in autoclaves, according to the usual scheme for this type of reaction:



The compounds obtained and their properties are shown in Table 1. There are 1 table; and 7 references, 2 U.S., 5 Soviet. The 2 U.S. references are: P. D. George, I. R. Elliott, J. Amer. Chem. Soc., 77, 3493 (1955); J. E.

Card 2/5

... (a) Compound
 ... (b) Formula; (c) yield (%); (d) bp in °C (p in
 mm of Hg); (e) found MK; (f) MK, calculated; (g)
 elemental analysis in %; (h) found; (i) calculated;
 (*) for literature data see: A. D. Petrov, V. A.
 Ponomarenko, and others, Izv. AN SSSR. Otd. Khim. n.
 1200 (1947); (**) based on chloride taken.

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Table 1.

78007

SOV/62-60-1-33/37

A	B	C	D	d_{10}^{20}	d_1^{20}	E	F	G	H	I
I*	$[\text{ClCH}_2\text{CH}_2\text{CH}_2\text{Si}(\text{CH}_3)(\text{C}_2\text{H}_5)\text{Cl}]_n$	35	101--103(34)	1,4553	0,8815					
II*	$[\text{ClCH}_2\text{CH}_2\text{CH}_2\text{Si}(\text{C}_2\text{H}_5)_2\text{Cl}]_n$	44	91--93(10)	1,4600	1,0400				Cl 35,6; 35,8	Cl 35,6
III	$[\text{ClCH}_2\text{CH}_2\text{CH}_2\text{Si}(\text{C}_2\text{H}_5)(\text{CH}_3)_2\text{O}]_n$	70	125(3)	1,4577	0,9950	86,4	86,3		Si 18,1	Si 17,8
IV	$[\text{ClCH}_2\text{CH}_2\text{CH}_2\text{Si}(\text{C}_2\text{H}_5)_2\text{O}]_n$	61	105--108(2)	1,4654	1,0062	94,7	95,2		Si 17,0; 16,6 C 48,9; 48,7 H 9,2	Si 16,4 C 48,9 H 9,4
V	$[\text{H}(\text{C}_2\text{H}_5)\text{NCH}_2\text{CH}_2\text{CH}_2\text{Si}(\text{CH}_3)(\text{C}_2\text{H}_5)_2\text{O}]_n$	69**	152(2)	1,4511	0,8745	102,5	102,5		Si 16,1; 16,5 C 58,2; 58,1 H 12,5; 12,1 N 8,8; 8,7	Si 16,8 C 57,8 H 12,1 N 8,4
VI	$(\text{CH}_3)_2\text{Si}-\begin{array}{c} \text{CH} \\ \\ \text{O} \end{array}-\begin{array}{c} \text{CH} \\ \\ \text{N}-\text{C}_2\text{H}_5 \end{array}$ $(\text{CH}_3)_2\text{Si}-\text{CH}_2$	91,5**	61(17)	1,4320	0,8768	60,1	59,9		C 46,5; 46,3 H 10,4; 10,5 N 7,7; 8,0	C 47,2 H 10,4 N 7,5
VII	$[\text{H}(\text{C}_2\text{H}_5)\text{NCH}_2\text{CH}_2\text{Si}(\text{CH}_3)_2\text{O}]_n$	58**	123--126(2)	1,4440	0,8658	93,4	93,5		N 9,2; 9,2	N 9,1
VIII	$[\text{HCH}_3\text{NCH}_2\text{CH}_2\text{CH}_2\text{Si}(\text{CH}_3)_2\text{O}]_n$	53**	112--114(2)	1,4433	0,8733	84,0	84,2		N 9,9; 10,0	N 11,1

Card 4/5

Brief Communications. Concerning Reaction of 78087
1, 1'-Di(chloroalkyl)tetraalkyldisiloxanes With SOV/62-60-1-33/37
Ethylamine

Noll, I. L. Speir, B. F. daubert, J. Amer. Chem. Soc.,
73, 3867 (1951).

ASSOCIATION: N. D. Zelinskiy Institute of Organic Chemistry,
Academy of Science USSR (Institut organicheskoy
khimii imeni N. D. Zelinskogo Akademii nauk SSSR)

SUBMITTED: June 27, 1959

Card 5/5

89911

S/062/61/000/002/007/012
B115/3207

15.8116 also 1164

AUTHORS: Vdovin, V. M., Pushchevaya, K. S., and Petrov, A. D.

TITLE: Organosilicon compounds with hydrocarbon bridges between the silicon atoms. Report no. 1. Interaction of 1,2-disilethanes with metal halides

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, no. 2, 1961, 281-286

TEXT: The authors found that the properties of the Si-R-Si group (R = hydrocarbon radical) have hitherto been insufficiently investigated, and therefore devoted this paper to studies of substances containing a

disilethane group $\text{Si}-\text{CH}_2-\text{CH}_2-\text{Si}$ with methyl radicals and chlorine

atoms on silicon atoms. They studied the effect of metal halides having the properties of Lewis acids upon the mentioned substances. The metal halides were subdivided into three groups owing to their interaction with 1,2-hexamethyl disilethane: Group I: Halides not reacting with

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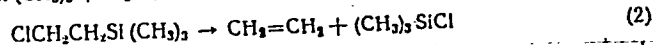
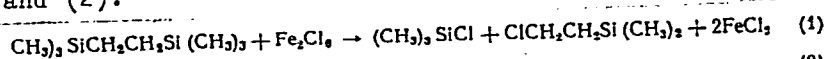
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B115/B207

Organosilicon compounds with ...

hexamethyl disilethane: ZnCl_2 , TiCl_4 , SnCl_4 , BF_3 etherate, FeCl_2 .

Group II: FeCl_3 reacts with formation of low-molecular compounds: trimethyl chloro silane and, obviously, ethylene. This proves the simultaneous splitting of the Si-C bond and the elimination of the carbon chain (bridge). The decomposition proceeds according to the reaction schemes (1) and (2).



Group III: Aluminum halides causing the formation of $\text{Si}(\text{CH}_3)_4$ and silicon-containing polymers. By moderate heating of $(\text{CH}_3)_3\text{SiCH}_2\text{-CH}_2\text{Si}(\text{CH}_3)_3$ with AlX_3 , 0.7-0.9 M $\text{Si}(\text{CH}_3)_4$ is separated. At the same time, a polymer of the following structure: $[-\text{Si}(\text{CH}_3)_2\text{-CH}_2\text{-CH}_2\text{-}]$ forms in the reaction mixture. Under special conditions (minimum amount of

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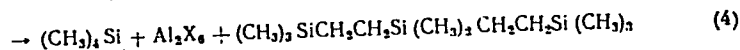
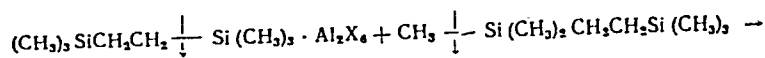
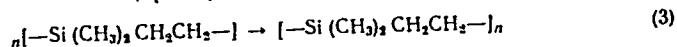
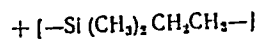
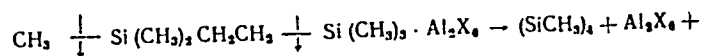
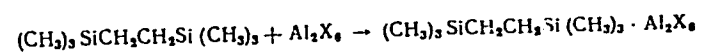
89011

S/062/61/000/002/007/012

B115/B207

Organosilicon compounds with ...

catalyst and interruption of the reaction at the moment where the precipitate reached ~ 0.3 M $\text{Si}(\text{CH}_3)_4$ two compounds were separated from this polymer: $[-\text{Si}(\text{CH}_3)_2\text{CH}_2\text{CH}_2-]_n$, where $n = 2, 3$. The reaction may be represented by the following schemes: (3) or (4).



X

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B115/B207

Organosilicon compounds with ...

The linear dimer forming in accordance with scheme (4), is transformed in a similar manner into linear polymers of the type:
 $(\text{CH}_3)_3\text{SiCH}_2\text{CH}_2[\text{Si}(\text{CH}_3)_2\text{CH}_2\text{CH}_2]_n\text{Si}(\text{CH}_3)_3$, or into cyclic polymers of the
 $[\text{Si}(\text{CH}_3)_2\text{CH}_2\text{CH}_2]_n$ type. The two processes occur with separation of
 $(\text{CH}_3)_4\text{Si}$. Furthermore, the authors studied the effect of the substituents
 on the silicon atom of 1,2-disilethanes upon the direction of poly-
 condensation. They found that the conversion of compounds with
 disilethane groups only proceeds if at least one silicon atom is
 linked with three CH_3 radicals. As regards the activity of the inter-
 action with AlCl_3 and AlBr_3 , the disilethanes studied form the follow-
 ing series: $(\text{CH}_3)_3\text{SiCH}_2\text{CH}_2\text{Si}(\text{CH}_3)_3 > (\text{CH}_3)_3\text{SiCH}_2\text{CH}_2\text{Si}(\text{CH}_3)\text{Cl}_2 >$
 $(\text{CH}_3)_3\text{SiCH}_2\text{CH}_2\text{SiCl}_3 \gg (\text{CH}_3)\text{Cl}_2\text{SiCH}_2\text{CH}_2\text{SiCl}_2(\text{CH}_3), \text{Cl}_3\text{SiCH}_2\text{CH}_2\text{SiCl}_3$.
 With disilethanes having only one $\text{Si}(\text{CH}_3)_3$ group and one
 $\text{Si}(\text{R})\text{Cl}_2$ group, the conversion proceeds according to schemes
 (6) and (7) which are similar to (3) and (4),

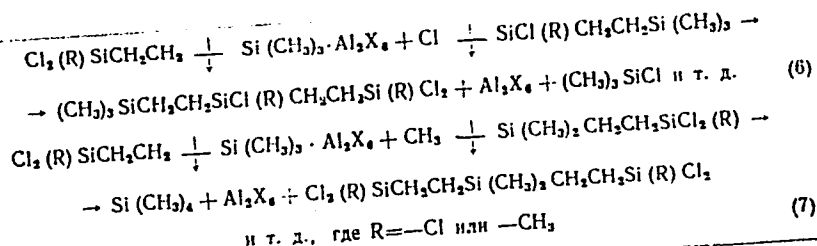
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83727

S/062/61/000/002/007/012
3115/3207

Organosilicon compounds with ...

respectively.



The fact that in the interaction of AlX_3 with $(\text{CH}_3)_3\text{SiCH}_2\text{CH}_2\text{SiCl}_3$ the $\text{Si}(\text{CH}_3)_4$ is formed proves that the polycondensation found follows, at least partly, scheme (4). This was also confirmed by the experiment in which the authors caused 10 mole% AlBr_3 to act upon the equimolar mixture of $(\text{CH}_3)_3\text{SiCH}_2\text{-CH}_2\text{Si}(\text{CH}_3)_3$ and $\text{Cl}_2(\text{CH}_3)_3\text{SiCH}_2\text{-CH}_2\text{Si}(\text{CH}_3)\text{Cl}_2$. $(\text{CH}_3)_3\text{SiCl}$ was the principal product obtained, which must be due to the

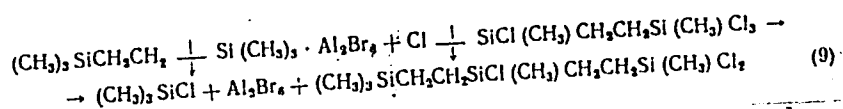
Card 5/7

69911

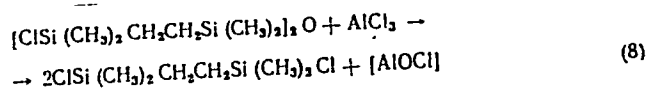
S/062/61/000/002/007/012
B115/B207

Organosilicon compounds with ...

following intermolecular reaction (9).



Polycondensation also proceeds under the action of AlCl_3 upon compounds containing the disilethane group and the $-\text{Si}-\text{O}-\text{Si}-$ group. Thus, in the reaction (8)



a considerable amount of a mixture of low-boiling methyl-silane chlorides forms simultaneously with the principal product (α - ω -dichloride). The polycondensation studied also proceeds in the case of other α , ω -hexamethyl disilalkanes: $(\text{CH}_3)_3\text{Si}(\text{CH}_2)_n\text{Si}(\text{CH}_3)_3$.

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S/062/61/000/002/007/012
B115/B207

Organosilicon compounds with ...

The compounds with $n = 1, 3, 4, 5$ studied by the authors formed $\text{Si}(\text{CH}_3)_4$ and a polymeric silicon hydrocarbon consisting of disilalkane fragments also in the reaction with aluminum halides. The authors thank Yu. P. Yegorov and L. A. Leytes for making the spectrum analysis. There are 10 references: 7 Soviet-bloc and 3 non-Soviet-bloc.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo
Akademii nauk SSSR (Institute of Organic Chemistry
imeni N. D. Zelinskiy of the Academy of Sciences USSR)

SUBMITTED: September 19, 1959; supplemented June 18, 1960

Card 7/7

15-8170

25216

S/062/. 61/000/007/006/009
B117/B215

AUTHORS: Vdovin, V. M., Pushchevaya, K. S., and Petrov, A. D.

TITLE: Organosilicon compounds with hydrocarbon bridges between silicon atoms

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 7, 1961, 1275 - 1279

TEXT: Information 2. Interaction with aluminum halides. The present paper reports on the behavior of 1,3-disilpropane during polycondensation. The disilpropane compounds used were produced by a known method (Ref. 5: V. M. Vdovin i A. D. Petrov, Zh. obshch. khim. 30, 838 (1960)). Their properties are the same as those described in publications (Refs. 5 and 6: A. V. Topchiyev, N. S. Nametkin i S. G. Durgar'yan, Zh. obshch. khim. 30, 927 (1960)). The $-\text{[Si(CH}_3)_2\text{CH}_2\text{CH}_2\text{CH}_2-]_n$ - polymer was obtained in the form of a colorless, viscous oil with a boiling point $> 300^\circ\text{C}$ by the method of Ref. 3 (V. V. Korshak, A. M. Polyakova i dr. Izv. AN SSSR, Otd. khim. n., 1959, 1116). Chemically pure AlX_3 preparations were used. The reaction of 1,3-disilpropane compounds with aluminum halides was

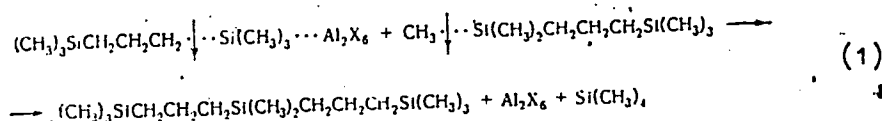
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Organosilicon compounds ...

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B117/B215

conducted in a flask with descending cooler and a vessel for low-boiling products. ($0 \div -10^{\circ}\text{C}$). Test conditions are tabulated. The reaction follows the scheme



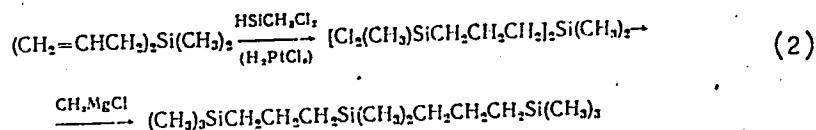
which is similar to scheme (b) of Ref. 1 (V. M. Vdovin, K. S. Pushchevaya i. A. D. Petrov, Izv. AN SSSR, Otd. khim. n. 1961, 281) for 1,2-disilethane derivatives. On the whole, the dimer yielded linear polymers of the type $(\text{CH}_3)_3\text{SiCH}_2\text{CH}_2\text{CH}_2[\text{Si}(\text{CH}_3)_2\text{CH}_2\text{CH}_2\text{CH}_2]_n\text{Si}(\text{CH}_3)_3$ with $n \geq 1$. The first two members ($n = 1$ and 2) were isolated. Infrared spectra confirmed their structure. The structure of the dimer was additionally confirmed by countersynthesis according to the scheme

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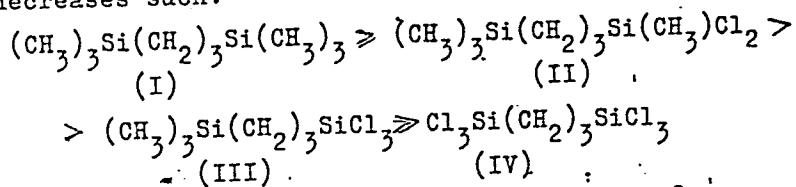
Organosilicon compounds with ...

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B117/B215



The properties of the substances obtained in both cases proved identical. The examination of the activity of 1,3-disilpropane derivatives with different ratios of CH_3 - and Cl groups on the Si atom showed that their activity decreases such:



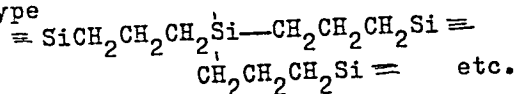
The last member in the sequence does not react at 200°C in the presence of AlBr_3 used in amounts up to 40 mole%. According to the low-boiling
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B117/B215

Organosilicon compounds with ...

products, the transformation in the case of (II) and (III) is similar to reaction (b) of Ref. 1. The formation of $\text{Si}(\text{CH}_3)_4$ from trichloride (III) indicates that the reaction follows an intramolecular mechanism. Besides the low-boiling products, a polymer residue forms which contains hydrolyzable chlorine. During reaction (1) at $90^\circ - 100^\circ \text{C}$, up to 0.95 M $\text{Si}(\text{CH}_3)_4$ per mole of $(\text{CH}_3)_3\text{SiCH}_2\text{CH}_2\text{CH}_2\text{Si}(\text{CH}_3)_3$ is separated, and a rubber-like polymer with a structure near $[-\text{Si}(\text{CH}_3)_2\text{CH}_2\text{CH}_2\text{CH}_2-]_n(\text{SiC}_5\text{H}_{10})$ is formed. The formation of $\text{Si}(\text{CH}_3)_4$ sets in again after further effective heating, and especially in the presence of considerable amounts of catalyst. It was assumed that the developing linear disilpropane polymers undergo cross-linking in effective heating which follows a scheme similar to (1), where $\equiv \text{Si} \dots \text{CH}_2\text{CH}_2\text{CH}_2\text{Si} \equiv$ bonds are ruptured. This reaction is accompanied by a formation of $\text{Si}(\text{CH}_3)_4$ and a spatial polymer of the type



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Organosilicon compounds with ...

This assumption was proven by heating the linear polymer $-\text{Si}(\text{CH}_3)_2\text{CH}_2\text{CH}_2\text{CH}_2-$ with AlCl_3 : $\text{Si}(\text{CH}_3)_4$ was separated from the reaction mixture, and an unsoluble, cross-linked polymer formed. In 1,3-disilpropane compounds like in 1,2-disilpropane derivatives, the temperature of the beginning reaction was lowered by an increase of the molar AlX_3 percentage. AlBr_3 proved a more active catalyst than AlCl_3 . The cleavage of $\text{Si}-\text{C}$ bonds in disilpropane groups apparently also takes place if the compound contains $\equiv\text{SiCH}_2\text{CH}_2\text{CH}_2\text{Si}\equiv$ and $\equiv\text{Si}-\text{O}-\text{Si}\equiv$ groups. There are 1 table and 9 references: 7 Soviet-bloc and 2 non-Soviet-bloc. The two references to English-language publications read as follows: Ref. 2: I. W. Curru et. al.: J. Organ, Chem. 23, No 8, 1219 (1958); Ref. 7: D. Hurd, J. Amer. Chem. Soc. 67, 1813 (1945).

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences USSR)

SUBMITTED: August 26, 1960
Card 5/6

15 8170

27905

S/079/61/031/010/005/010
D227/D303

AUTHORS: Petrov, A.D., Vdovin, V.M., Golubeva, G., and
Pushchevaya, K.S.

TITLE: Organosilicon compounds with hydrocarbon bridges
between silicon atoms. IV. Pyrolysis of α, ω -
disilalkanes

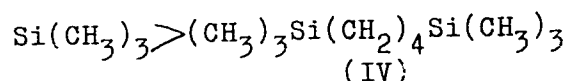
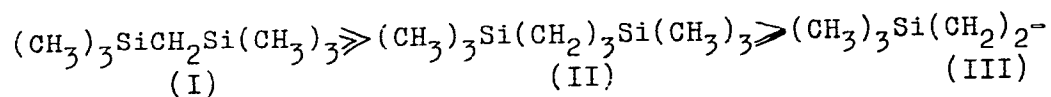
PERIODICAL: Zhurnal obshchey khimii v. 31, no. 10, 1961,
3230-3234

TEXT: In the present work the authors studied the pyrolysis of
 α, ω - disilalkanes of the type $R_3Si(CH_2)_n SiR_3$ where R is Cl or
 CH_3 and $n = 1$ to 4, at $600^\circ C$ in a continuous flow system. The
thermal stability of these compounds was determined by the quan-
tity of 1) Gaseous and low boiling products; 2) Heavy residues;
3) Gases evolved. The decreasing order of stability of the in-
vestigated α, ω - hexamethyldisilalkanes is as follows:

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Organosilicon compounds ...

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D227/D303



and the results of pyrolysis are represented in Table 1 where A is the weight % of gaseous and low boiling product and is calculated from $\frac{M_1 - M_2}{M_1 - 1}$, M_1 = weight of the original disilalkane, M_2 = weight of pyrolysis products after distillation of low boiling products, B is the volume of gas (at $20 \pm 2^\circ\text{C}$) in ml. per 0.1 g. mol. of disilalkane at a given flow rate; and C is weight % of high boiling residues. Experimental procedure: The pyrolysis was carried out in a quartz tube heated to $600 \pm 5^\circ\text{C}$ and the products

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collected in a trap cooled to -10 to -15°C . Fractionation of products was done using a column with 20 theoretical plates and the fractions obtained were analyzed spectrometrically. Compound I gave gaseous products consisting of 93.9% H_2 and 6.1% CH_4 ; compound III yielded 13.5% $\text{CH}_2 = \text{CHSi}(\text{CH}_3)_3$ b.pt $54-55^{\circ}\text{C}$, low boiling products mainly $(\text{CH}_3)_3\text{SiH}$ and $(\text{CH}_3)_4\text{Si}$ and gases H_2 , CH_4 , C_2H_6 and C_2H_4 . Compound II decomposed into $(\text{CH}_3)_3\text{SiH}$ and $\text{Si}(\text{CH}_3)_4$ and also $(\text{CH}_3)_3\text{SiCH} = \text{CH}_2$, with H_2 , CH_4 , C_2H_6 , C_2H_4 and C_3H_6 . Compound IV gave a fraction, b.pt $0-53^{\circ}\text{C}$, containing $(\text{CH}_3)_3\text{SiCH}_2\text{CH} = \text{CH}_2$ and $(\text{CH}_3)_3\text{SiCH}_2\text{CH} = \text{CH}_2$; also gaseous products as above. $\text{Cl}_3\text{SiCH}_2\text{CH}_2\text{SiCl}_3$ decomposed into HSiCl_3 , SiCl_4 and a mixture of $\text{CH}_2 = \text{CHSiCl}_3$ and $\text{CH}_3\text{CH}_2\text{SiCl}_3$. Compound $\text{Cl}_2(\text{CH}_3)\text{SiCH}_2\text{CH}_2\text{Si}(\text{CH}_3)\text{Cl}_2$ yielded beside $\text{CH}_3\text{SiCl}_2\text{H}$ and CH_3SiCl_3 a mixture

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Organosilicon compounds ...

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composed of $\text{CH} = \text{CHSi}(\text{CH}_3)\text{Cl}_2$ and $\text{CH}_3\text{CH}_2\text{Si}(\text{CH}_3)\text{Cl}_2$. The formation of $(\text{CH}_3)_3\text{SiH}$ during the pyrolysis of II, and Cl_3SiH and $\text{CH}_2 = \text{CHCH}_2\text{SiCl}_3$ during the pyrolysis of VII ($\text{Cl}_3\text{SiCH}_2\text{CH}_2\text{CH}_2\text{SiCl}_3$) indicates breaking of the Si-C bond in the disilpropane chain. At the same time, separation of $\text{CH}_2 = \text{CHSi}(\text{CH}_3)_3$ from products of pyrolysis of II, and Cl_3SiCH_3 and $\text{CH}_2 = \text{CHSiCl}_3$ from VII is due only to the breaking of C-C bond in the bridging groups. It may be said that under the action of high temperatures $\text{Si}(\text{CH}_2)_n\text{Si}$ ($n \geq 2$) decomposes along Si-C as well as C-C bonds. There are 1 figure, 1 table and 16 references: 6 Soviet-bloc and 10 non-Soviet-bloc. The 4 most recent references to English-language publications read as follows: M. Kumada et alia, J. Org. Chem. 23, 252 (1958); K. Shijna, M. Kumada, J. Org. Chem. 23, 139 (1958); A.I. Barry et alia incl. a. End. Chem. 51, 131 (1959); P.D. George et alia, Chem. Revs. 56, 1074, 1075, 1077 (1956).

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Organosilicon compounds ...

27905

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D227/D303

ASSOCIATION: Institut organicheskoy khimii im. N.D. Selinskogo
Akademii nauk SSSR (Institute of Organic Chemistry
im. N.D. Selinskiy, Academy of Sciences USSR)

SUBMITTED: September 30, 1960

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Card 5/6

88571

S/020/61/136/001/019/037
B016/B055

5.3700

AUTHORS: Vdovin, V. M., Bushchevaya, K. S., Belikova, N. A.,
Sultanov, R., Plate, A. F., and Petrov, A. D., Corresponding
Member AS USSR

TITLE: Derivatives of Silanes With Hydrocarbon Bridges Between the
Si Atoms. The Polymerization of 1,1-Dimethyl Silicocyclo-
pentane

PERIODICAL: Doklady Akademii nauk SSSR, 1961, Vol. 136, No. 1, pp. 96-99

TEXT: The authors studied the effect of aluminum halides (AlCl_3 and
 AlBr_3 on 1,1-dimethyl silicocyclopentane. They regard the latter as a
bridge compound in which both ends of the organic radical -R- are attached
to the same silicon atom. Experimental results confirmed the authors
assumption that, under the influence of AlX_3 , the $\equiv\text{Si} - (\text{CH}_2)_4$ bonds would
be more reactive than the $\equiv\text{Si} - \text{CH}_3$ bonds. As expected, this lead to
formation of a reactive radical $-\text{Si}(\text{CH}_3)_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2-$, and in the presence
Card 1/3

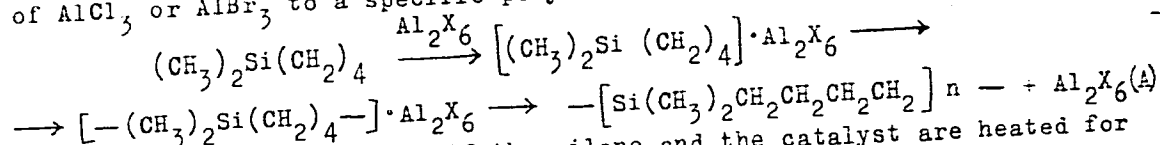
Derivatives of Silanes With Hydrocarbon Bridges
Between the Si Atoms. The Polymerization of
1,1-Dimethyl Silicocyclopentane

88571

S/020/61/136/001/019/037

BO16/BO55

of AlCl_3 or AlBr_3 to a specific polymerization reaction (A):



This reaction is very rapid if the silane and the catalyst are heated for a short time. The authors verified the structure of this product by synthesizing it from corresponding fragments (B). Infrared spectroscopy proved these two products to be identical. Differences between the spectra of these two polymers and that of the monomer are explained by the spacial position of the carbon chains (isomerism). The authors thank Yu. P. Yegorov and Ye. D. Lubush for performing the spectroscopic analyses. Finally the authors discuss the polycondensation of 1,4-ditrimethyl disilyl butane. The reaction product was a colorless, rubbery insoluble polymer similar to the polymerization product obtained in reaction (A). There are 1 figure and 6 Soviet references.

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Derivatives of Silanes With Hydrocarbon Bridges S/020/61/136/001/019/037
Between the Si Atoms. The Polymerization of B016/B055
1,1-Dimethyl Silicocyclopentane

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii
nauk SSSR (Institute of Organic Chemistry imeni N. D.
Zelinskiy of the Academy of Sciences USSR)

SUBMITTED: October 1, 1960

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Card 3/3

15 8170

3.303
S/020/61/141/004/008/019
B103/B101

AUTHORS: Vdovin, V. M., Pushchevaya, K. S., and Petrov, A. D.,
Corresponding Member AS USSR

TITLE: Organosilicon compounds with carbon bridges between the
silicon atoms. Thermal conversions

PERIODICAL: Akademiya nauk SSSR. Doklady. v. 141, no. 4, 1961, 843 -
846

TEXT: The authors continued their studies on the thermal conversion of
the $\text{Si}(\text{CH}_2)_n\text{Si}$ group (Petrov, A. D., Vdovin, V.M. at al. ZhOKh, 31, no. 10
(1961)) by investigating the effect of temperatures up to 400°C on com-
pounds containing a bridge group. They tested substances of the types
 $(\text{CH}_3)_3\text{Si}-(\text{CH}_2)_n-\text{Si}(\text{CH}_3)_3$ and $\text{R}(\text{CH}_3)\text{Si}-(\text{CH}_2)_n$ in sealed glass ampullas.
It has been found that the properties of α,ω -hexamethyl disilyl alkanes
with $n = 2, 3, 4$ are not modified at $350 - 360^\circ\text{C}$ by heating for three
and several hours. This is also true for five and six-membered cyclanes.
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S/020/61/141/004/008/019
B103/B101

Organosilicon compounds with carbon ...

1,1-dimethyl silico-cyclopentane, for instance, is stable at 390°C for 3 hr. On the contrary, four-membered compounds are polymerized: 1-methyl-1-chloro-silico-cyclobutane beginning from 170 - 180°C and 1,1-dimethyl silico-cyclobutane beginning from 125 - 130°C. Thereby solid elastic substances are formed which are soluble in the initial monomer as well as in benzene and chloroform. The polymers of an elementary composition similar to that of the initial silico-cyclobutanes have the same infrared spectra (MKC-10(IKS-10) apparatus), if they are produced by the reactions [(I)] or [(II)] (I = or). On the other hand, the spectrum of the polymer from 1,1-dimethyl silico-cyclobutane differs from that of a (B) structure polymer. Therefore the structure (A) was attributed to the former polymer. Control tests have shown that at 180 - 200°C $\text{H-Si}(\text{CH}_3)(\text{R})\text{-CH}_2\text{CH=CH}_2$ is not polymerized noticeably, whereas $\text{Cl}(\text{CH}_3)_2\text{Si}(\text{CH}_2)_2$ is completely polymerized. Compounds with Si-H bonds are completely absent in the monomer distilled after incomplete polymerization. The different behavior of silico-cyclobutanes as compared to that of five and six-membered silico-cyclanes at elevated temperatures may be due to the tension of the four-

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S/020/61/141/004/008/019

B103/B101

Organosilicon compounds with carbon ...

membered ring. By thermal polymerization of silico-cyclobutanes very high-molecular products are obtained; this is not so, when linear polymers of the $\left[\text{CH}_2\text{CH}_2\text{CH}_2\overset{\text{R}}{\underset{\text{R}'}{\text{Si}}} \right]$ type are produced by other methods. Raman spectra

of the two cyclanes used were taken by means of an *ИОН-51* (ISP-51) apparatus. They did not show frequencies of the Si-H or C=C bonds. Presumably, the silico-cyclobutane group is characterized by both a very intense line in the range $430 - 450 \text{ cm}^{-1}$ and lines in the ranges 725, 815, 878, 903, 927, and 1125 cm^{-1} . In the Raman spectrum of allyl-methyl chloro hydrosilane the Si-bound allyl group is characterized by the frequencies: 407, 940, 995, 1165, 1300, 1392, 1635, 3003, and 3080 cm^{-1} , whereas the line 2175 cm^{-1} characterizes the $\equiv\text{Si-H}$ bond. The polymer - $\left[\text{Cl}(\text{CH}_3)\text{SiCH}_2\text{CH}_2\text{CH}_2 \right]_n$ - was obtained by heating $\text{CH}_2=\text{CHCH}_2\text{SiCl}(\text{CH}_3)\text{H}$ dissolved in isopropanol with a slight admixture of H_2PtCl_6 up to 80°C . This polymer is a brittle paraffinoid mass with boiling point of $60 - 65^\circ\text{C}$,
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Organosilicon compounds with carbon ...

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B103/B101

which is readily soluble in benzene and CCl_4 . The yield was about 60%.
The polymer of 1-methyl-2-chloro-silico-cyclobutane obtained at 230°C is a transparent rubber-like substance which hydrolyzes in air. L. A. Leytes is thanked for making the spectrum analyses. There are 13 references: 8 Soviet and 5 non-Soviet. The three most recent references to English-language publications read as follows: Ref. 5: L. H. Sommer et al., J. Am. Chem. Soc., 79, 3295 (1957); Ref. 6: C. Earborn, Organosilicon Compounds, London, 1960, p. 370; Ref. 10: R. West, J. Am. Chem. Soc., 76, 6012 (1954).

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy, AS USSR)

SUBMITTED: August 17, 1961

Card 4/4

VDOVIN, V.M.; NAMETKIN, N.S.; PUSHCHEVAYA, K.S.; TOPCHIEV, A.V.

Expansion reaction of a heterocyclic compound having a silicon atom in its cycle. Izv.AN SSSR.Utd.khim.nauk no.6:1127 '62.

(MIRA 15:8)

1. Institut neftekhimicheskogo sinteza AN SSSR.
(Silicon organic compounds)

VDOVIN, V.M., ZAVYALOV, V.L., PUSHCHEVAYA, K.S.

"Umwandlungen von silicium kohlenstoff heterozyklen mit Si im ring
unter einwirkung von $AlCl_3$."

"Conversion of Si-C heterocycles containing Si in the ring under the influence of
 $AlCl_3$."

Report submitted to the 2nd Dresden Symp. on Organic and Non- Silicate
Silicon Chemistry.
Dresden, East Germany 26-30 March 1963

Institute for petrochemical syntheses of the Academy of Science of the USSR,
Moscow.



S/002/64/000/002/010/020
2144/2106

AUTHORS: Yeevlin, V. K., Nametkin, N. S., Pogachevaya, K. S., and
Tepchikov, A. V. (Moscow)

TITLE: Synthesis and conversions of 1-chloro-methyl-1-methyl silico-
cyclopentane

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh
nauk, no. 2, 1963, 274 - 281

TEXT: 1-chloro-methyl-1-methyl silico-cyclopentane (I) (b.p. 168.30°C,
 n_D^{20} 1.4758, d_4^{20} 0.9893) was synthesized from chloro-methyl-methyl-dichloro
silane and $\text{BrMg}(\text{CH}_2)_4\text{MgBr}$ in 50% yield. It was used as the initial sub-
stance for the synthesis of new derivatives with carbofunctional radicals.
The structure of I determined from IR spectra was

$\text{CH}_2=\text{CH}_2-\text{Si}(\text{CH}_3)_2-\text{CH}_2\text{Cl}$. Derivatives were obtained by introducing functions
groups into the methyl radical by nucleophilic substitution of Cl. 1-iodo-
methyl-1-methyl silico-cyclopentane was synthesized from I, KI and acetone

Card 1/3

1444/14/000/100/010/020
8144/2106

Synthesis and conversions of...

by boiling for 24 hrs; b.p. 94.5°C, n_D^{20} 1.4562, d_4^{20} 1.4973, yield 89%.
1-thiocyanato-methyl-1-methyl silico-cyclopentane was obtained from I and KSCN;
b.p. 108 - 110°C, n_D^{20} 1.5110, d_4^{20} 1.5295, yield 70 %. Reacting I with
potassium acetate yielded 1-acetoxy-methyl-1-methyl silico-cyclopentane;
b.p. 96 - 97°C, n_D^{20} 1.4550, d_4^{20} 0.9675, yield 64.5%. The differing proper-
ties of I and the 1-chloro-methyl-1-methyl silico-cyclopentane obtained from
1,1-dimethyl silico-cyclopentane by R. Fessenden, R. J. Freeman (J. Organ.
Chem., 26, 2083 (1961)) are attributed to a different isomeric structure:
 $\begin{array}{c} \text{CH}_2 \quad \text{CH}_2 \quad \text{CH}_3 \\ | \quad | \quad | \\ \text{CH}_2 - \text{CH}_2 - \text{Si} - \text{CH}_3 \\ | \quad | \\ \text{CH}_2 \quad \text{CH}_2 \end{array}$ Reaction with AlCl_3 produced a widening of the ring with
formation of 1-chloro-methyl silico-cyclohexane; b.p. 106.7°C, n_D^{20} 1.4613,
 n_4^{20} 0.9847, yield 31 %. The structure was established spectrometrically
based on the 797, 943, and 1014 cm^{-1} bands characteristic of the silico-
cyclohexane ring: $\begin{array}{c} \text{CH}_2\text{CH}_2 \quad \text{CH}_3 \\ | \quad | \\ \text{CH}_2 - \text{CH}_2\text{CH}_2 - \text{Si} - \text{CH}_3 \\ | \quad | \\ \text{CH}_2 \quad \text{CH}_2 \end{array}$ and titration with KOH proved the
Card 2/3

Synthesis and conversions of...

2/062/63/000/002/010/020
B144/B156

presence of the Si-Cl bond. The widening of an Si-containing heterocyclic ring has been achieved for the first time. Under the effect of H_2SO_4 the ring of I was opened and a disiloxane formed.

ASSOCIATION: Institut neftekhimicheskogo sinteza Akademii nauk SSSR
(Institute of Petrochemical Synthesis of the Academy of
Sciences USSR)

SUBMITTED: May 17, 1962

Card 3/3

YEGOROV, Yu.P.; PUSHCHEVAYA, K.S.; LUBUZH, Ye.D.; VDOVIN, V.M.; PETROV, A.D.

Organosilicon compounds with hydrocarbon bridges between silicon atoms. Report No.7: Structure of condensation products. Izv.AN SSSR Otd.khim.nauk no.5:822-831 My '63. (MIRA 16:8)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Silicon organic compounds) (Hydrocarbons)

L 11226-63

EPF(c)/EWP(j)/EWT(m)/BDS--AFFTC/ASD--Pr-h/Pc-l--RM/MAY/WW

ACCESSION NR: AP3000123

S/0062/63/000/005/0822/0831

AUTHOR: Yegorov, Yu. P.; Pushchevaya, K. S.; Lubuzh, Ye. D.; Vdovin, V. M.;
Petrov, A. D.TITLE: Organosilicon compounds with hydrocarbon bridges between the silicon atoms

SOURCE: AN SSSR. Izvestiya otdeleniye khimicheskikh nauk, no. 6, 1963, 822-831

TOPIC TAGS: organosilicon compounds, polycondensation, polymerization, polymer, structure, IR spectroscopy, aluminum chloride, aluminum bromide

ABSTRACT: The feasibility of synthesizing polymers having alternating p-xylylene or p-phenylene radicals and silicon atoms in the backbone by the polycondensation of 1,4-bis(trimethylsilyl)xylylene or 1,4-bis(trimethylsilyl)phenylene in the presence of an Al_2Cl_6 or Al_2Br_6 catalyst has been established. The structure of previously prepared products of the catalytic polycondensation of various α,ω -bis(trimethylsilyl)alkanes as well as of the thermal polymerization of 1,1-dimethylsilacyclopropane and 1,1-dimethylsilacyclobutane have been studied by IR spectroscopy. The structure of the polymer of 1,1-dimethylsilacyclopentane,

Card 1/2/

L 1448-66 EWT(m)/EPF(c)/ENP(j)/T RM

ACCESSION NR: AP5022933

UR/0062/65/000/008/1453/1459

546.287+542.952

AUTHOR: ⁴⁴⁵⁵ Nametkin, N. S.; ⁴⁴⁵⁵ Vdovin, V. M.; ⁴⁴⁵⁵ Pushchevaya, K. S.; ⁴⁴⁵⁵ Zav'yalov, V. I.

TITLE: ⁴⁴⁵⁵ Polymerization of 1,1-disubstituted silacyclopentanes ¹

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 8, 1965, 1453-1459

TOPIC TAGS: silane, polymerization

ABSTRACT: A study has been made of the catalytic polymerization of 1,1-disubstituted silacyclopentanes of the type



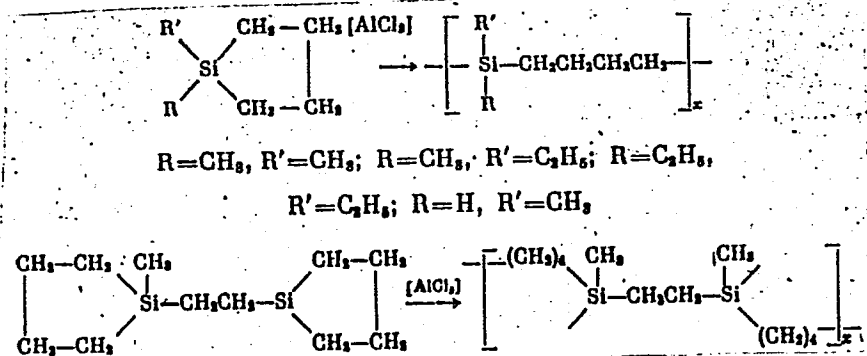
where $n = 2$, and R and R' are alkyl, aryl, substituted alkyl, chloro, or hydrogen radicals. The reaction was carried out at atmospheric pressure and 20–120°C with AlCl_3 catalyst. It was found that silacyclopentanes with alkyl or hydrogen substituents polymerized to form heterochain silicohydrocarbon polymers. The polymers were colorless, highly viscous, soluble in the common organic solvents, and had molecular weights of 1×10^3 to 2.5×10^3 . Bis(methyltetramethylenesilyl)ethane formed

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L 1448-66

ACCESSION NR: AP5022933

an insoluble tridimensional network product. Based on spectroscopic data the reactions were assumed to proceed as follows:



On the other hand, silacyclopentanes with chlorine, phenyl, benzyl, or substituted alkyl radicals did not polymerize. This difference in polymerizability was interpreted in terms of differences in the interaction of the cyclopentanes with AlCl_3 . Of all the polymers prepared, that of 1-hydro-1-methylsilacyclopentane was of spe-

Card 2/3

L 1448-66

ACCESSION NR: AP5022933

cial interest in view of the reactivity of its Si-H group. This made possible its modification, e.g., by treatment with allylnitrile or by oxidation. Orig. art. has: 6 formulas, 2 figures, and 2 tables. [SM]

ASSOCIATION: Institut neftekhimicheskogo sinteza im. A. V. Topchiyeva Akademii nauk SSSR (Institute of Petrochemical Synthesis, Academy of Sciences, SSSR)

SUBMITTED: 28Jun63

ENCL: 00

SUR CODE: OC, GC

NO REF SOV: 009

OTHER: 004

ATD PRESS: 4097

Card 3/3

NAMETKIN, N.S.; VDOVIN, V.M.; PUSHCHEVAYA, K.S.; ZAV'YALOV, V.I.

Polymerization of 1,1-substituted silicacyclopentanes. Izv.
AN SSSR. Ser. khim. no.8:1453-1459 '65. (MIRA 18:9)

1. Institut neftekhimicheskogo sinteza im. A.V. Topchiyeva
AN SSSR.

L 5095-66 EWT(m)/EPF(c)/T/EWP(j) RM

ACCESSION NR: AP5025505

UR/0062/65/000/009/1547/1553

543.422+546.287

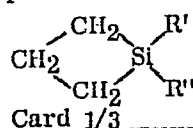
AUTHOR: Nametkin, N. S.; Oppengeym, V. D.; Zav'yalov, V. I.; Pushchevaya, K. S.;
Vdovin, V. M.

TITLE: Infrared absorption spectra of 1, 1-substituted silicocyclobutanes, silico-
cyclopentanes, and corresponding polymers

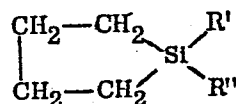
SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 9, 1965, 1547-1553

TOPIC TAGS: organosilicon compound, polymer structure, IR spectrum

ABSTRACT: The study aims at determining the frequencies of the absorption band maxima characterizing a 4- and 5-membered heterocyclic ring containing a silicon atom. The characteristic frequencies obtained were used to elucidate the structure of polymeric products obtained by thermal polymerization of 1, 1-substituted silicocyclobutanes



and 1, 1-substituted silicocyclopentanes



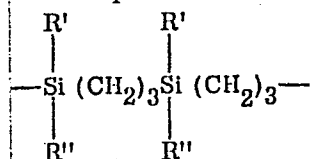
Card 1/3

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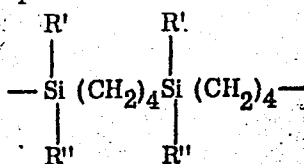
L 5095-66

ACCESSION NR: AP5025505

IR spectra of the polymers obtained from the silicocyclobutanes showed that the polymerization products are heterochain polymers with the structural fragment



as the link of the principal chain. Products obtained from 1, 1-substituted silicocyclopentanes are heterochain polymers with the structural fragment



as the link of the principal chain.

Orig. art. has: 5 tables and 5 formulas,

Card 2/3

L 5095-66

ACCESSION NR: AP5025505

ASSOCIATION: Institut neftekhimicheskogo sinteza im. A. V. Topchiyeva Akademii nauk
SSSR (Institute of Petrochemical Synthesis, Academy of Sciences, SSSR) 44, 53

SUBMITTED: 28Jun63

ENCL: 00

SUB CODE: OC, GC

NO REF SOV: 008

OTHER: 003

Card 3/3 *mb*

NAMETKIN, N.S.; VDOVIN, V.M.; PUSHCHEVAYA, K.S.

Catalytic reactions involved in the formation of 1,1-dimethyl-
silicocyclopentane. Dokl. AN SSSR 150 no.3:562-565 My '63.
(MIRA 16:6)

1. Institut neftekhimicheskogo sinteza AN SSSR. 2. Chlen-
korrespondent AN SSSR (for Nametkin).
(Silicon organic compounds)
(Catalysis)

PUSHCHEVOY, Ya. I.

USSR/Medicine - Roentgenology

Card 1/1

Authors : Pushchevoy, Ya. I.

Title : The diagnosis of choledocho-duodenal fistulas

Periodical : Vest Rentgen i Radiol 1, 84-85, 1954

Abstract : Describes the diagnosis of choledocho-duodenal fistula. The clinical diagnosis of this rare complication is made difficult by a lack of any characteristic symptoms. X-ray investigation, however, will reveal the presence of this dangerous complication, which if not known prior to resection, can cause death. No references. One photograph (X-ray).

Institution : X-ray Department (Chief-Ya. I. Pushchevoy), and Surgical Department (Chief-Docent A. N. Tsellarius) of the Odessa Associated Railroad Clinical Hospital.

PUSHCHEVOY, Ya.I.

Calculi of the pancreas. Vest.rent. i rad. no.2:93-95 Mr-Ap '55.
(MLRA 8:5)

1. Iz rentgenovskogo otdeleniya (zav. Ya.I.Pushchevoy) Odesskoy
ob'yedinennoy dorezhnoy klinicheskoy bol'nitsy (nach. V.B.Kogan).
(PANCREAS, calculi)
(CALCULI,
pancreas)

PUSHCHEVOY, Ya.I.; SKROTSKIY, A. I.

Significance of spontaneous pneumothorax in pediatrics. *Pediatrics*
no.4:78-79 J1-Ag '55. (MLRA 8:12)

1. Iz rentgenovskogo otdeleniya (zav. Ya.I. Pushchevoy) Detskoy
klinicheskoy dorozhnoy bol'nitsy Odessko-Kishinevskoy zheleznoy
dorogi (nachal'nik V.I. Gus'kova)
(PNEUMOTHORAX, in infant and child)

PUSHCHEVOY, Ya.I.

Duration of the course of pulmonary cancer. Vest. rent. i rad. 36
no. 1:65-66 Ja-F '61. (MIRA 14:4)

1. Iz rentgenovskogo otdeleniya (zav. Ya.I. Pushchevoy) Ob'yedinennoy
zheleznodorozhnoy klinicheskoy bol'nitsy Odesskoy zheleznoy dorogi
(nachal'nik V.B. Kogan).
(LUNGS--CANCER)

PUSHCHEVOY, Ya. I.

Case of primary lymphosarcoma of the stomach. Nov. khir. arkh.
no.2:69 '62. (MIRA 15:2)

1. Rentgenologicheskoye otdeleniye (zav. - Ya. I. Pushchevoy) i
khirurgicheskoye otdeleniye (zav. - dots. A. N. TSellarius)
Odesskoy ob'yedinennoy zheleznodorozhnoy klinicheskoy bol'nitsy.

(STOMACH--CANCER) (HODGKIN'S DISEASE)

PUSHCHEVOY, Ya. I. (Odessa)

Eosinophilic granuloma of the stomach. Klin. med. no.2:133-136
'62. (MIRA 15:4)

1. Iz rentgenologicheskogo otdeleniya (zav. Ya. I. Pushchevoy)
Odesskoy ob'yedinennoy klinicheskoy dorozhnoy bol'nitsy (nach.
A. Kh. Filonov)

(EOSINOPHILES) (STOMACH—DISEASES)

PUSHCHEVOY, Ya.I.

Diagnosis of choledochoduodenal fistula. Klin.khir. no.5:80-81
My '62. (MIRA 16:4)

1. Rentgenologicheskoye otdeleniye (zav. - Ya.I.Pushchevoy) i
khirurgicheskoye otdeleniye (zav. - dotsent A.N.TSellarius)
Odesskoy ob'yedinennoy dorozhnoy klinicheskoy bol'nitsy.
(FISTULA, BILLIARY)

PUSHCHEVOY, Ya. I.

Diagnosis of lung cancer in young persons. Probl. tub. 40 no.4:
103-1-4 '62. (MIRA 15:6)

1. Iz rentgenovskogo otdeleniya (zav. Ya. I. Pushchevoy) Odesskoy
ob'yedinennoy klinicheskoy zheleznodorozhnoy bol'nitsy (nach.
V. B. Kogan)

(LUNGS--CANCER)

PUSHCHEVOY, Ya.I. (Odessa)

Duration of the course of lung cancer. Klin. med. 41 no.4:
91-98 Ap '63. (MIRA 17:2)

1. Iz ob'yedinennoy zheleznodorozhnoy klinicheskoy bol'nitsy
Odesskoy zheleznoy dorogi (nachal'nik A.Kh. Filonov).

PUSHCHIN, F. YE.

USSR/Biology, Agricultural - Toxic Chemicals Apr 52

"Apparatus for Combined Spraying and Dusting," Ya. Mikhaylov

"Nauka i Zhizn'" No 4, p 28

F.Ye.Pushchin, Sr Sci Assoc, All-Union Inst of Plant Protection, and V.A.Fedorov and Z.S.Nasonovskaya, Sci Associates, All-Union Inst of Agr Mach Bldg, developed an app mounted on a motor truck which permits either spraying or dusting, or simultaneous spraying and dusting of large areas. Water may be sprayed while a solid poison is dusted, so that adhesion of the powder to plants is improved. The inventors received a Stalin prize in 1951.

221T3

PUSHCHIN, G.A.

Thermal stabilization of the modulation characteristic of a pulse-width modulator. Vop. pered. inform. 2:142-145 '63.

Thermally stable pulse amplifier using silicon transistors.
Ibid.:151-154 (MIRA 16:12)

PUSHCHIN, G.A.

Method for correcting the transfer characteristic of a telemetering
channel. Vop. pered. inform. 1:125-132 '62. (MIRA 16:6)
(Telemetering)

ACCESSION NR: AT4001245

S/2900/63/000/002/0151/0154

AUTHOR: Pushchin, G. A.

TITLE: Thermostable pulse amplifier using silicon transistors

SOURCE: AN UkrRSR. Insty*tut mashy*noznastva i avtomaty*ky*. L'viv. Voprosy* peredachi informatsii, no. 2, 1963, 151-154

TOPIC TAGS: thermostable transistorized pulse amplifier, silicon transistor pulse amplifier, broadband transistorized amplifier, broadband silicon transistor amplifier

ABSTRACT: After discussing the various difficulties involved in temperature stabilization of pulsed silicon-transistor amplifiers, the author describes a feedback amplifier suitable for telemetering systems, which has high temperature stability over a wide temperature range and is insensitive to a supply voltage fluctuation of $\pm 20\%$. Orig. art. has: 4 figures and 1 formula.

Card 1/3 V

ACCESSION NR: AT4001245

ASSOCIATION: Insty*tut mashy*noznavstva i avtomaty*ky AN UkrSSR
(Institute of Science of Machines and Automation, AN UkrSSR)

SUBMITTED: 15Apr62

DATE ACQ: 03Dec63

ENCL: 01

SUB CODE: GE

NO REF SOV: 002

OTHER: 000

Card 2/3 V

POKHIN, G.V. (Kuytyshev, Artillnerskaya ul., d. 127, 201)

Abstracts of articles received by the editors. Group, travel
protaz. 24 no. 49-50 S 163. (MIRA 1712)

1. Iz katedry gosital'noy khirurgii (zav. - prof. A.M. Amirev)
Kuytyshevskogo meditsinskogo instituta.

KIKTENKO, V.S.; KASHANOVA, N.I.; KUDRYAVTSEV, S.I.; PUSHCHIN, N.I.

New apparatus for bacteriological analysis of the air in negative
temperatures. Lab. delo 7 no.3:38-40 Mr '61, (MIRA 14:3)
(AIR--BACTERIOLOGY)

KIKTENKO, V.S.; SAFRONOV, Yu.P.; KUDRYAVTSEV, S.I.; EL'MAN, R.I.;
FEDOROV, B.F.; PUSHCHIN, N.I.; FEDOROVICH, A.A.

Arrangement for automatic count of the particles of a bacterial
aerosol. Lab. del. 7 no. 10:57-60 0 '61. (MIRA 14:10)
(AEROSOLS)

S/194/62/000/006/035/232
D295/D308

AUTHORS: Kiktenko, B.S., Safronov, Yu.P., Kudryavtsev, S.I.,
El'man, R.I., Fedorov, B.F., Pushchin, N.I., and
Fedorovich, A.A.

TITLE: Apparatus for the automatic counting of the particles
of a bacterial aerosol

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika,
no. 6, 1962, abstract 6-2-65 p (Labor. delo, no. 10,
1961, 57-60)

TEXT: A description is given of an apparatus for the automatic
counting of the number of particles of a bacterial aerosol passing
through the cuvette of the flow-type BAM(VDK) ultramicroscope. The
apparatus consists of a photo-electronic unit, an amplifier and a
pulse counter. The intensity of the light flux scattered by the
particles is sufficient to be recorded by the CSy -19 (FEU-19) and
 CSy -25 (FEU-25) photo-multipliers. The duration of a light impulse
from a particle is 0.5 - 0.6 sec. and the pulse repetition frequency
depends on concentration and does not usually exceed 300 -
Card 1/2

Apparatus for the automatic counting ... S/194/62/000/006/035/232
D295/D308

400 pulses/min. An electro-mechanical Cs-1M (Sb-1M) type counter with 6000 pulses/min. resolving power is used for recording. Error due to the inertness of the circuit can arise as a consequence of the occurrence of two or more particles in the field of vision of the instrument at < 0.1 sec. interval. The error due to this cause is 1 %. The apparatus has been used for counting particles of a bacterial aerosol from a liquid culture of bacillus mirabilis. The results of automatic counting exceed by 25 % the results of visual counting. In investigating the number of dust particles of the outdoor air of a town, 39.28×10^6 solid particles per 1 l of air were observed visually, while the automatic apparatus detected 110×10^6 particles. 2 figures and 4 references. [Abstracter's note: Complete translation.] ✓

Card 2/2

KIKTENKO, V.S.; KASHANOVA, N.I.; KUDRYAVTSEV, S.I.; PUSHCHIN, N.I.

New method for examining bacterial diffusion in the air. Zhur.
mikrobiol. epid. i immun. 32 no.7:6-12 Je '61. (MIRA 15:5)
(AIR--MICROBIOLOGY)

KIKTENKO, V.S., doktor med.nauk, prof.; SAFRONOV, Yu.P., kand.tekhn.nauk;
KUDRYAVTSEV, S.I.; EL'MAN, R.I.; FEDOROV, B.F.; PUSHCHIN, N.I.;
FEDOROVICH, A.A.

Photoelectronic count of the number of aerosol particles of organic
and inorganic origin. Gig. i san. 26 no.2:47-53 F '61.

(MIRA 14:10)

(AEROSOLS)

POKHODIN, I. I.

Production of welded brass pipes. Biol. tekhn.-ekon. inform. Gos.
nauch.-issl. inst. nauch. i tekhn. inform. 17 no.6:7-9 Je '64.
(MIRA 17:11)

STEFANCHUK, V., inzh.; PUSHCHINA, A., inzh.

Turning device for platforms of T-41 hoists. Stroitel' no.7:14
J1 '59. (MIRA 12:10)

(Hoisting machinery)